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ABSTRACT

The purpose of this handbook is to develop positive attitudes and skills toward healthy eating and healthy lifestyles among Yukon First Nations people. The introduction describes traditional food sources of the Yukon and how Native peoples met their nutritional needs by eating a variety of wild animal, fish, and plant foods. However, current eating habits of Yukon peoples have resulted in the lack of certain minerals and vitamins in the diet and in consumption of too much fat. The first section describes the four food groups, including examples of traditional and market foods; offers diet recommendations on variety, balance, and moderation; describes needed nutrients for energy and health; describes the role and food sources of calcium and fiber; describes different types of fat; and provides guidelines about food safety. The second section describes risk factors associated with heart disease and diabetes and explains lactose intolerance--the inability to digest lactose, a natural sugar found in milk. The third section describes special dietary needs during pregnancy, provides information on breast-feeding and formula feeding, describes ways of introducing solid foods to infants, and overviews the dietary needs of the elderly. The last section includes learning activities related to healthy eating. Each activity includes an objective, needed materials, information on conducting the activity, and instructional materials. Also included are recipes for preparing dishes using both traditional and market foods, an evaluation form, a list of additional resources, photographs, and references. (LP)

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The Healthy Eating Handbook for Yukon Nations

by

Vanessa M. Nardelli and Eleanor E. Weiss

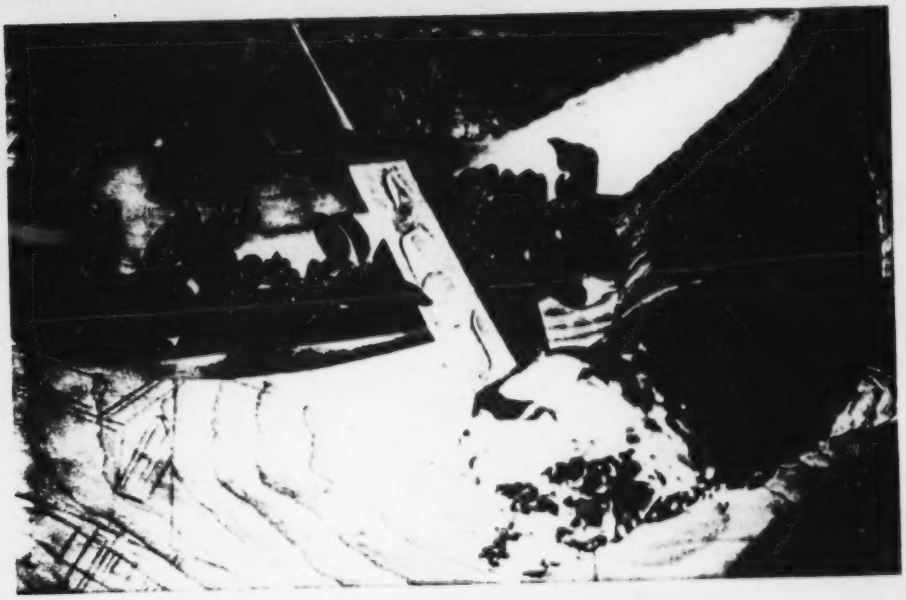

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Figure 1: Cleaning salmon at Klukshu. Note the fish traps in the background *(Photo: Department of Fisheries and Oceans)*

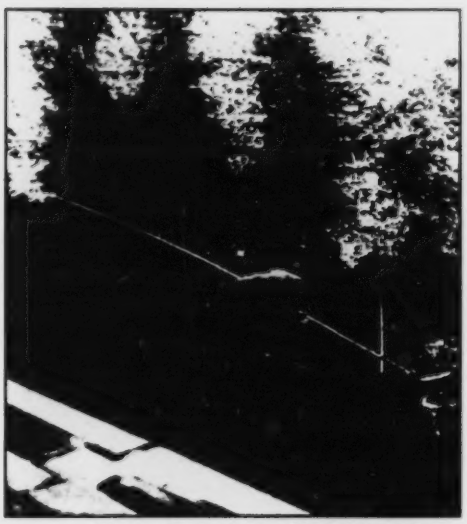

Figure 2: Paul Birckel of Whitehorse gaffing chinook salmon. Salmon is a good source of omega-3 fatty acids, which help to decrease risk of heart disease (See pages 17 & 22). How does this type of fishing contribute to energy balance? (See page 11). *(Photo: V.M. Nardelli)*

Figure 3: Lily Kane cleaning salmon. *(Photo: Department of Fisheries and Oceans)*

The Healthy Eating Handbook

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Vanessa M. Nardelli and Eleanor E. Wein

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Community Issues
in the North

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About the front cover:

Ram's horn spoon with soapberries and paddle, used to make Indian ice cream. Artifacts kindly supplied by R. Chambers. Photo: E.E. Wein. Background - blackberries (mossberries), a traditional source of vitamin C. Photo: R.W. Wein.

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Preface

The overall goal of "The Healthy Eating Handbook for Yukon First Nations" is to encourage development of positive attitudes and skills towards healthy eating and balanced lifestyles among Yukon First Nations people. Two main objectives are:

1. To provide information on the nutrient values and benefits of traditional and market foods.

2. To provide nutrition education activites that help people develop the knowledge and skills required to choose healthful diets.

The handbook is intended as a resource for Yukon First Nations community workers, such as community health representatives, community health nurses, social workers, teachers, teacher aides and cultural educators. Information is presented mainly through group learning activities, that are fun and easy to use. Selected pages are designed as handouts, which may be copied and distributed to group members.

The idea for a handbook arose from an earlier food and nutrition study, requested by three First Nations, in order to document use of traditional foods as part of contemporary diets. Although the illustrations come primarily from these communities, the healthy eating concepts can be applied to all communities.

Many Yukon people and others contributed to this handbook. All are acknowledged on the next page.

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Much appreciation is expressed to the Yukon First Nations people who contributed their suggestions and ideas for the development of **The Healthy Eating Handbook for Yukon First Nations**, and /or who tried out the learning actitivies for us.

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INTRODUCTION

Foods from the Past

Years ago Yukon First Nations people consumed only foods that came directly from the land and water. The availability and abundance of food were not always consistent; therefore, food was shared throughout the community. Fishing, hunting and gathering methods of the past involved much physical activity and endurance. Much energy was expended and this contributed to a balanced lifestyle. The diet consisted of wild animal, fish and plant foods which provided essential energy and nutrients for survival. Moose and caribou and, in some areas, sheep provided most of the meat.

Meat could be eaten throughout the year due to preservation by drying. Dry meat eaten with fat was a popular meal or snack food. Occasionally, the tender meat of an unborn calf was given to the elders as a special treat and symbol of respect (McClellan, 1987). Meat, organs, and especially the head or leg bones with marrow, were made into soups or stews.

Smaller animals and birds also contributed to the Yukon diet. Mammals used for food included gophers (Arctic ground squirrels), snowshoe hare, beaver, porcupine, muskrat, mountain sheep and goat. The availability of these animals varied with location, habitat and season. Birds included ptarmigan, goose, duck, swan and grouse. Birds provided not only a source of meat, but also eggs.

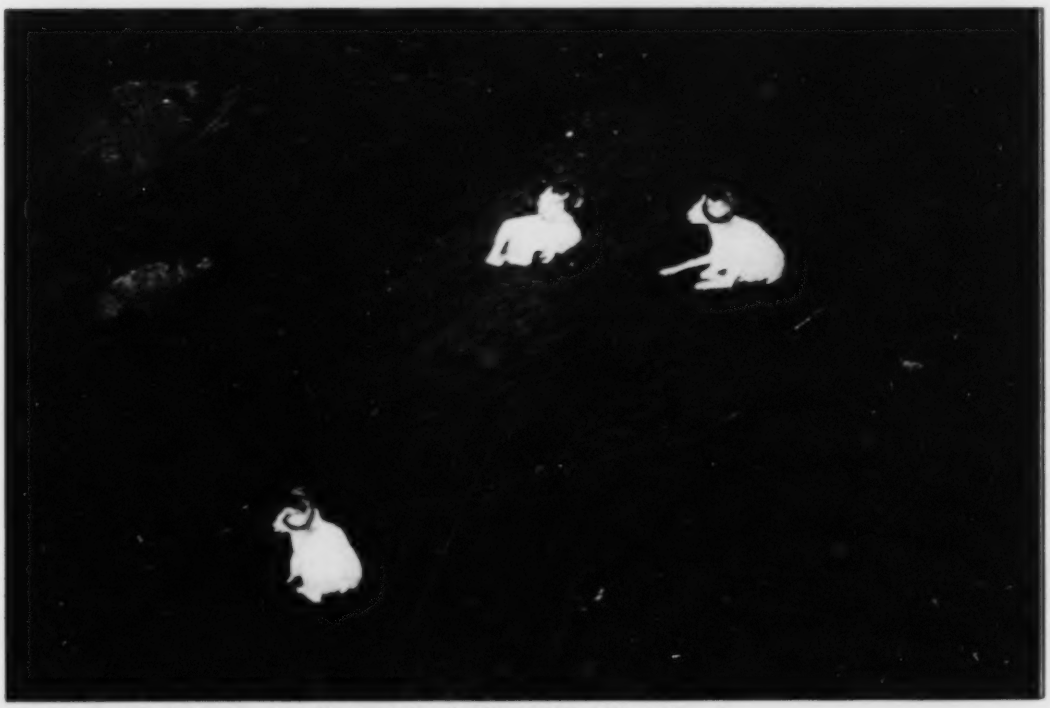


Figure 4. Dall sheep, a traditional food (Photo: R. Chambers).

Another very important food source was fish. Yukon species include chinook, chum, sockeye, and coho salmon, whitefish, jackfish (northern pike), Arctic grayling, trout, and loche or ling cod (burbot). Common preparation methods included roasting, frying and making fish head soup. Fish was preserved by drying and in later times by canning or freezing. The process of canning fish softened the bones and made them edible. Fish eggs were a delicacy. They were eaten raw, boiled, dried, or fried in fish fat and spread on bannock.

Figure 5. Drying fish - a traditional preservation method still practised today (Photo: Department of Fisheries and Oceans.)

Wild plants also contributed to the Yukon First Nations diet. Edible berries included the blackberry, cranberry, blueberry, soapberry, bearberry, rosehip, saskatoon berry, and red currant. Berry picking or "berrying" was an enjoyable task, usually done by women and girls (McClellan, 1975). Berries were dried, mixed with fat, and then stored for later use as snacks. Sometimes they were mixed into bannock dough, or made into jams. Other wild plant foods were wild onions, arctic dock, fireweed shoots and leaves, dandelion leaves, wild rhubarb, and bear root. Labrador tea leaves, and the inner bark scrapings and resin or sap of balsam fir and spruce trees were also used for nutritional or medicinal purposes.

Although the traditional diet consisted of a variety of foods which supplied Yukon First Nation people with many nutrients, the diet may have been short in certain nutrients such as calcium and dietary fibre which are presently obtained primarily from market foods. In traditional times, only

infants drank milk during breast feeding. In order to obtain calcium, other people chewed on the soft spongy ends of moose or caribou bones, whole fish heads and bones, or consumed fish head soup. This practice was especially important for mothers who were breastfeeding their babies.

In the past, preservation and preparation of food required much ingenuity. Birchbark baskets or the empty stomach and bladder of caribou were used as storage containers for berries (McClellan, 1987). Berries were mixed in animal grease in order to retain moisture and nutrients. Before pots and kettles becames available, soups and other food were cooked in animal skin. In addition to boiling and roasting, meat was also dried to preserve it for a longer time period.

Fish was cut into small strips and dried on racks over a small fire of cottonwood, which also helped to keep the flies away (McClellan, 1987). Salmon heads or whole gophers were sometimes stored underground until fermentation occurred, and a cheese-like substance was produced (McClellan, 1975).

Despite the difficulties they faced, earlier generations of Yukon First Nations people met these challenges and survived in large part by consuming traditional foods from many sources in their environment.

Current Food Patterns

Today Yukon First Nations people can eat both traditional food from the land and water, and market food sold in stores. However, traditional foods are still important. Moose, caribou and salmon are still dietary staples (Wein, 1994; Wein and Freeman, 1995). The amount harvested varies, depending on location. Almost all parts of the animal are eaten, including the heart, kidney, tongue, liver, intestines, bone marrow, head and nose. Soups, stews, sausages and roasts are common moose and caribou dishes. Ducks, geese, ptarmigan and grouse also contribute occasionally to the modern diet. Berries such as blackberries (mossberries), low and high bush cranberries, blueberries, soapberries, raspberries, and strawberries are also eaten. Labrador tea, balsam fir inner bark tea and bear root ("Indian sweet potatoes") are still consumed by many people (McClellan, 1987). In contrast to long ago, some animals may be less available due to an increased human population and environmental changes such as highways, mining activities, pollution, and the growth of urban centres such as Whitehorse.

Market foods can help to balance the modern Yukon First Nations diet. In particular, milk products, whole grain products, fruits, and vegetables can provide nutrients which are in limited supply in the traditional foods most commonly eaten today. Milk, cheese, yogurt, and ice cream provide calcium, a nutrient which was probably limited in the traditional diet. These dairy products also provide vitamin A and riboflavin. Milk also provides vitamin D. Grain products such as whole grain breads, pasta, rice, and cereals provide dietary fibre, thiamin, riboflavin, niacin, and small amounts of iron. Although it does not provide dietary fibre, white flour has been enriched and hence it too provides thiamin, riboflavin, niacin, and iron.

The availability of prepackaged foods such as canned and frozen soups, meats, fish, vegetables, and fruits allows people to stock up on some foods for long periods of time. This is convenient for those who shop infrequently, since they can eat these foods when traditional foods are in short supply.

Market foods need to be chosen wisely. Many are quite high in fat and/or sugar, and low in fibre. Examples of these foods include potato chips, candy bars, carbonated drinks, high fat baked goods such as cakes and doughnuts, fish and chicken deep fried in batter. Eating too much of these foods may create an unbalanced diet. Market foods are preserved quite differently from methods of the past. For example, canned soups, stews and macaroni are convenient foods to store, and to prepare quickly. Canned and dried soups, however, usually contain high amounts of salt, and hence, should be eaten in moderation. On the other hand, canned fruits, vegetables and baked beans provide many nutrients with little or no added fat. The soft texture of canned fruits and vegetables are especially good for elders who cannot chew as easily as younger adults. For infants, soft home cooked vegetables (without added salt), and cooked or canned fruits are best. The amount of salt contained in regular canned vegetables is too high for infants.

Although both traditional and market foods are now available, some Yukon First Nations people are not getting enough of certain vitamins and minerals, while they are getting more fat in their diet than is good for health. According to a recent study of three Yukon First Nations in four communities (Wein, 1994; 1995, 1996; Wein and Freeman, 1995), the present Yukon First Nations diet, on average, meets the health recommendations for protein, vitamins B6, B12, phosphorus, iron, thiamin, riboflavin and niacin. However, many people are not getting enough folate, calcium, vitamins A and D, and some people were not getting enough vitamin C and zinc. More older than younger adults, and more women than men were not getting enough of these nutrients. Furthermore, many people are getting too much fat in their diet. Increasing awareness of healthy eating and balanced lifestyles among Yukon First Nations people of all ages is the first step toward improving nutrition and health.

Purpose

The overall goal of "The Healthy Eating Handbook for Yukon First Nations" is to promote the development of positive attitudes and skills toward healthy eating and balanced lifestyles among Yukon First Nations people. One main objective is to provide information on the nutrient value and benefits of traditional and market foods. Another main objective is to provide nutrition education activities that help people develop the skills required to choose healthful diets.

The handbook is intended as a resource for Yukon First Nations community workers, such as community health representatives, community health nurses, social workers, teachers, teacher aides, and cultural educators. Information is presented mainly through group learning activities that are fun and easy to do. Selected handout sheets are provided for photocopying and use with groups.

Objectives

Specific objectives of the handbook are as follows:

1. To promote healthy eating among Yukon First Nations people by illustrating choices in four food groups which can maintain balance and variety in the diet, using traditional and market foods available in the Yukon.

2. To assist Yukon First Nations people to better understand the special dietary needs of pregnant women, lactating women, infants, and elders.

3. To increase awareness of the risk factors which contribute to heart disease, diabetes mellitus and osteoporosis, and the means of prevention.

4. To increase awareness of the role of calcium and its food sources, and to encourage greater dietary intake of calcium.

5. To increase awareness of the role of dietary fibre and its food sources, and to encourage greater dietary intake of fibre.

6. To increase awareness of the roles of vitamins A, D, and folate, and to encourage greater intakes of these nutrients.

7. To increase awareness of dietary fat, and means of controlling fat intakes.

Teaching Tips

As educators, we sometimes forget important tips which help us to teach others. You may find the following Teaching Tips helpful. This handbook also contains "take home" handouts which summarize the information.

1. Communication is a two way process. The educator and the learner must have equal opportunity to share thoughts and be heard.

2. Do not assume that the group does not have any knowledge about your topic. Give them an opportunity to first tell you what they already know.

3. Respect each individual's ideas and suggestions.

4. Encourage group discussion.

5. Do not overload the group with too much information at once. Learning is easier when it is approached in small steps.

6. Encourage the group to repeat, review, and summarize the information.

7. Always give encouragement.

Starting a group discussion can be difficult, especially if group members have not developed a trust with each other or with the educator. Icebreakers can be useful tools which enhance the humour, trust, and enjoyment among the group.

Examples of **Icebreakers:**

Encourage everyone to share with the group:

1. one of his/her favourite foods.

2. a memorable and happy experience.

3. a favourite activity (ie. cooking, dancing, walking, fishing etc.).

4. his/her expectations of the group sessions.

If group members do not feel comfortable participating in the activities or Icebreakers, do not force them.

7

FOOD AND NUTRIENTS FOR OUR BODY

The objectives of this section are:

1. To illustrate the four food groups with examples of traditional and market foods.
2. To provide some health recommendations regarding variety, balance and moderation.
3. To describe the nutrients that our bodies need for energy and health.
4. To describe the role and food sources of calcium.
5. To describe the role and food sources of fibre.
6. To describe the different types of fat.
7. To provide guidance about food safety.

Food Groups

What are the four food groups?

1. Grain Products
2. Milk and Calcium Products
3. Vegetables and Fruits
4. Meat and Alternatives

Figure 6 . The meat and alternatives group was abundant at this feast in Old Crow. What food groups are missing from this photo? (Photo: V.M. Nardelli).

Examples of Traditional and Market Foods

1. Grain Products

- Bannock
- Wild Rice
- Bread
- Noodles
- Cereals
- Crackers
- Pilot Biscuits
- Oatmeal
- Long or Short Grain Rice

2. Milk and Calcium Products

- Yogurt
- Milk
- Fish Bones
- Cheese
- Fish Head Soup
- Canned Fish with Edible Bones

3. Vegetables and Fruits

- Berries
- Wild Onions
- Apples
- Oranges
- Fireweed Leaves
- Turnip
- Potatoes
- Tomatoes
- Carrots
- Squash
- Lettuce
- Fruit/Vegetable Juice
- Bear Root
- Rhubarb
- Arctic Dock
- Green and Yellow Beans

4. Meat and Alternatives

- Moose
- Baked Beans
- Stews
- Beaver
- Seeds and Nuts
- Gopher
- Geese
- Ptarmigan
- Duck
- Poultry
- Lake Trout
- Ham
- Peanut Butter
- Organs (e.g. tongue, heart, liver)
- Egg
- Moose Sausage
- Caribou
- Split Pea Soup
- Fish Head Soup
- Salmon

5. Other Foods

Note: Many of the following **Other Foods** are high in fat and/or sugar and low in vitamins and minerals. These foods should be avoided or limited in the diet.

- Candy
- Popsicles
- Pop
- French Fries
- Potato Chips
- Chocolate Bars
- Doughnuts
- Coffee
- Cakes

Alcohol is unhealthy because it can break the balance among the emotional, physical, spiritual and mental aspects of our health. It is best to avoid alcohol.

Canada's Food Guide to Healthy Eating

suggests a range of daily servings for adults and children which include:

Grain Products:	**5-12 servings per day**
Examples of 1 serving:	1 slice of bread or bannock 3/4 cup of hot oatmeal
Vegetables and Fruit:	**5-10 servings per day**
Examples of 1 serving:	1 medium carrot 1/2 cup of juice 1/2 cup of canned fruit
Meat and Alternatives:	**2-3 servings per day**
Examples of 1 serving:	2/3 cup of canned fish 2 tbsp peanut butter 50-100 g caribou (a piece about the size of a deck of cards)
Milk Products:	**Servings per day for:**
	Children ages 4-9 years: 2-3 servings **Youth ages 10-16 years:** 3-4 servings **Adults:** 2-4 servings **Pregnant and breast feeding women:** 3-4 servings
Examples of 1 serving:	1 cup of milk 2 slices of processed cheese

The amount of food needed varies with each individual. A person's age, gender, and level of physical activity determine how many servings per day he/she needs for growth and development.

Example: A growing, active male teenager needs more food than an adult man who sits at a desk all day... OR

A pregnant woman, or a breastfeeding mother needs more food than a non-pregnant, non-lactating woman of similar body size.

Recommendations:

1. Choose a **variety** of foods from each food group.

   Examples of **variety** include:
   - dark green, yellow, and red vegetables
   - edible roots, leaves, stems, and flowers of vegetables
   - fruit with different colours and textures
   - organs, bone marrow, and flesh of animals
   - bones, eggs, and flesh of fish
   - bannock, breads, pilot biscuits, hot and cold cereals, wild, brown, and converted white rice
   - preparing the same foods in different ways: apples, applesauce, dried apples, apple juice

* Eating a variety of traditional and market foods contributes to a complete diet, which helps maintain good health.

2. **"Energy in" should equal "energy out". This defines balance.**

   - **"Energy in"** is the energy from food which is eaten.
   - **"Energy out"** is the energy that is spent on everyday bodily functions and physical activity.
   - If **"Energy in"** is higher than **"Energy out"**, a person will gain weight.
   - Eating a balanced diet contributes to a balanced lifestyle and good health.

3. Eat foods in **moderation**.

   - Choosing only the amount of food that the body needs contributes to moderation. It is important not to overeat.
   - Eat high fat/sugar foods only occasionally. These foods should not be eaten daily.
   - The amount of food that the body requires differs for each person according to age, gender, and level of physical activity.

Nutrients for Our Body

What are nutrients?

The two main types are macronutrients and micronutrients. Dietary fibre and water are also needed.

1. **Macronutrients - provide energy.**

a) **Protein - found in meat, fish, cheese, milk, beans, eggs, nuts, and seeds.**

- helps to build and repair body tissues
- helps to fight infection
- supplies energy to the body

b) **Carbohydrates - found in bannock, berries, cereal, pasta, sugar, and roots.**

- supplies energy to the body
- helps to burn fat

c) **Fat - found in lard, butter, margarine, fatty meats, fish oils, vegetable oils, and salad dressings**

- supplies energy
- helps the body absorb vitamins A, D, E, K

2. **Micronutrients - help the body to use other nutrients.**

Micronutrients refer to vitamins and minerals in foods. Some important ones are:

a) **Calcium - found in milk, cheese, fish bones, yogurt, and bone soup.**

- helps to build strong bones and teeth
- helps blood to clot when an injury occurs

b) **Folate - found in organ meat, dark green leafy vegetables, fruit, fish, eggs, nuts, and beans**

- helps to make new cells
- helps to make new red blood cells

c) **Vitamin A - found in deep orange-colored vegetables such as carrots, turnips and squash, wild greens, moose and caribou liver, and in small amounts in milk and margarine.**

- helps the body fight infection
- helps to maintain healthy skin

d) Vitamin D - found in fortified milk, salmon, eggs, margarine, fish and other livers

- helps the body absorb calcium

e) Vitamin C -found in berries, rose hips, fireweed leaves, oranges and other fruit, fruit juice, and certain fruit drink crystals (Read the label.)

- keeps teeth and gums healthy
- keeps blood vessel walls strong

Vitamin and Mineral Supplements

Choosing food wisely can generally provide all the vitamins and minerals that we need. However, there may be special cases such as during pregnancy or breastfeeding where needs are especially high. Some elders cannot eat certain foods; therefore, they may require supplements. Vitamin and mineral supplements should only be taken if recommended by a health professional.

3. Other Dietary Components -

a) Dietary Fibre - found in whole grain breads and bran cereals, legumes, fruits and vegetables which contain seeds or skins, such as berries and potato skins

- helps to prevent constipation
- helps to maintain healthy blood sugar levels
- helps to lower blood cholesterol levels
- since dietary fibre cannot be digested, it does not contribute energy

b) Water

- helps to carry nutrients to the cells
- helps to carry waste material away from the cells

Throughout each day, the body loses water through sweating and urinating. It is important to replace water loss by drinking water, juice and milk. Caffeinated beverages such as coffee, tea, and most pop make the body lose water; therefore, other fluids are needed.

Nutrients for Special Emphasis (Calcium, Fibre, Fat)

Calcium

What foods contain calcium?

1. Milk
2. Cheese
3. Soups or stews with bone
4. Yogurt
5. Fish head soup
6. Skim milk powder
7. Edible bones in canned fish
8. Broccoli
9. Animal stomach contents
10. Dried beans/peas
11. Sunflower seeds

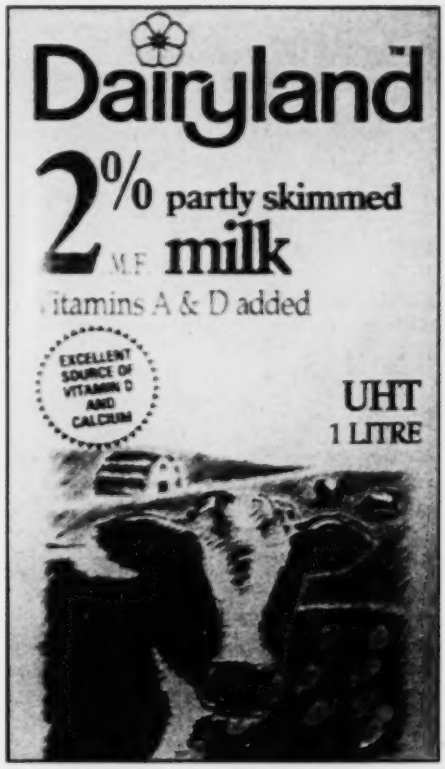


Figure 7 . Milk - a source of calcium, riboflavin, vitamins A and D (Photo: E.E. Wein).

What does calcium do for our body?

1. Helps build strong bones and teeth

2. Helps build healthy nerves and promote blood clotting

What happens if we do not have enough calcium in our diet?

Sometimes as we get older, especially in females, bones may become thinner and bone mass decreases. This condition is called **osteoporosis**. A diet low in calcium may be a factor in the development of osteoporosis.

This condition may not have existed for Yukon First Nations people in the past, because their level of physical activity was much higher than it is now. Physical activity may help to prevent the development of osteoporosis. Calcium sources in the past included mother's milk, bones of mammals and fish, and some vegetables. Today, these sources of calcium may not be sufficient to prevent osteoporosis.

Dietary Fibre

What is fibre?

Fibre is the part of plants (bran, oatmeal, berries, rhubarb etc.) which cannot be broken down by the body. This is "bulk" or "roughage". Fibre is classified as either **soluble** or **insoluble**. It is important to eat a variety of foods that contain fibre, including fruits, vegetables, and whole grains.

What foods contain fibre?

* Whole grain breads
* Whole grain cereals
* Bran muffins
* Legumes
* Berries
* Oatmeal
* Oranges
* Baked potato with skin
* Root vegetables
* Apples
* Bean salads
* Fireweed leaves
* Arctic dock
* Fruits and vegetables with seeds and skin

Figure 8. Whole grain cereals - a source of fibre (Photo: V. M. Nardelli).

Why is fibre important? Fibre helps to:

1. lower the level of fat in the blood.
2. lower cholesterol in the blood.
3. control blood sugar levels.
4. maintain a healthy digestive tract.
5. prevent constipation and reduce the risk of colon cancer.

The Two Rules of Fibre

1. Gradually increase the amount of dietary fibre.
   Too much fibre can cause minor bloating and gas which may feel uncomfortable.
2. Drink more fluids as more high fibre foods are eaten.
   Fibre absorbs fluid in the digestive track and increases the amount of fluid needed.

Dietary Fat

What is cholesterol?

Cholesterol is a sticky fat-like substance made naturally by the body. In fact, most of the cholesterol found in the blood has been made by the body. Only a small portion (about 20%) comes from food we eat. Cholesterol in food is called **dietary cholesterol**. Foods that contain dietary cholesterol include eggs, shell fish, organ meats and animal fats.

It is important not to consume too much dietary cholesterol. Cholesterol from food or produced by the body may build up along the walls of arteries and vessels that carry blood throughout the body. The effect is similar to the natural flow of a river which is slowed down or blocked by a dam. Heart disease occurs when the vessels to the heart become clogged and the flow of blood is reduced.

What are the different types of fat?

1. Saturated Fat:
   - comes from animal fat such as lard, beef and moose fat, high-fat cheese, butter, cream, coconut, and palm oils.
   - solid at room temperature
   - hard margarines (sold in a block, hard at refrigerator temperature) contain trans fatty acids which affect the body in the same was as saturated fat.
   - **raises** blood cholesterol levels

2. Polyunsaturated Fat:
   - comes from fish, safflower, sunflower and corn oils, soft margarine, and some nuts such as almonds, filberts and walnuts.
   - helps to lower blood cholesterol

3. Monounsaturated Fat:
   - comes from olive, canola, and peanut oils.
   - does not seem to influence blood cholesterol

4. Omega-3 Fat:
   - comes from fish oils, such as salmon
   - helps to decrease risk of heart disease.

What is "total dietary fat"?

Total fat is the sum of all types of fat. A variety of fat sources in **small amounts** contributes to a balanced diet. Limiting total dietary fat can help to prevent heart disease and some cancers, and can lower blood cholesterol levels.

Low Fat Choices

Choosing foods low in fat helps to lower total daily fat intakes. Using only small amounts of fat or no added fat when preparing food also lowers total fat intake.

Try some of these low fat cooking ideas. Discuss new ideas with friends and family.

1. Prepare meat by broiling, boiling, roasting, barbequeing, or drying rather than frying.
2. Remove the skin from chicken, grouse, duck, and geese before eating it.
3. Trim the visible fat off meat such as caribou, moose, pork, and beef.
4. When choosing milk, try skim, 1%, or 2% rather than whole or evaporated milk.
5. Use spices, herbs, vinegar or lemon juice rather than butter, margarine, salad dressing, or lard.
6. When preparing soup or stew, remove some of the visible fat from the top after it cools.
7. Bake or boil potatoes, instead of frying them.

Food Safety

It is very important to practice safe storage and preparation cooking methods to avoid getting sick from food poisoning. Symptoms of food poisoning include stomach ache, dizziness, vomiting, and diarrhea. The following tips can help prevent food poisoning.

Food Preparation:

Wash your hands thoroughly with warm soapy water before preparing food, and after handling raw meat or fish (before touching the cooked food).

Scrub all utensils used to cut raw meat, fish and poultry with hot soapy water, rinse with clean water, then rinse again with a mixture of water and bleach (9 parts water to 1 part bleach).

Scrub the work area including the cutting boards, counters, and floors with warm soapy water, rinse with water, then rinse again with a mixture of water and bleach.

Food Storage:

Separate raw foods from prepared foods, to decrease the risk of contaminating prepared foods with the germs from the raw foods.

Store prepared foods containing eggs, meat, fish, or milk in the refrigerator.

Keep cooked foods hot (not just warm) before serving.

Throw away any wrapping material, or scrub clean with bleach any containers in which food has spoiled, in order to prevent cross-contamination. Prepackaged meat, fish and milk products should be eaten before the expiry date stamped on the package.

Foods that are potentially harmful if the above storage tips are not practiced include:

* meat, fish, poultry
* milk products
* eggs
* ground meat, small cuts of meat found in stews
* hot dogs, bologna
* gravies and sauces
* unrefrigerated canned food which has been opened

Water Supply: Untreated water which has not come directly from your own treated water supply should be boiled for at least 10 minutes before drinking. This will destroy any harmful the bacteria (for example, prevent "beaver fever").

SPECIAL DIETS

The objectives of this section are:

1. To describe the risk factors which contribute to heart disease.
2. To describe risk factors that contribute to diabetes.
3. To explain a condition called lactose intolerance.

Figure 9. Moose head soup served at a feast in Old Crow (Photo: E.E.Wein).

Heart Disease

What is Heart Disease?

Heart diseases is a condition that involves a restricted flow of blood to the heart.

Heart disease may develop under several conditions:

1. Heredity - many members of the same family may develop heart disease
2. Obesity- a condition of excessive overweight
   (example: more than 10 kilograms above healthy weight)
3. Stress - physical, emotional, spiritual or mental exhaustion
4. Smoking
5. Inactive lifestyle
6. High blood cholesterol

How can we decrease our risk of developing heart disease?

1. Maintain a healthy body weight by eating a variety of traditional and market foods which are low in fat and sugar, high in fibre, and contain many nutrients.
2. Maintain a moderate level of physical activity by doing something active at least three times a week. Walking, playing sports, hunting, fishing, and berry picking are some examples.

An individual who has high blood cholesterol or **heart disease** should choose foods which are low in total fat, especially saturated fat. Examples are fish and lean cuts of meat. He/she should also choose foods that are high in fibre (ie. berries, whole grains, vegetables). Salt intake may increase blood pressure, which makes the heart work harder; salt intake should be limited too.

Obesity not only increases the risk of heart disease, but also increases the risk of many other conditions, such as diabetes and some cancers. Fast weight loss diets are not the solution; however healthy eating and physical activity can help to achieve and maintain a healthy weight.

Diabetes Mellitus

What is Diabetes?

Diabetes is a condition that occurs when the body does not produce enough insulin. Insulin is a substance which helps blood sugar enter cells. Cells need sugar for fuel to provide energy. Without insulin, the body cells starve, while levels of sugar in the blood rise.

Diabetes symptoms can be controlled with a healthy diet, physical activity, and sometimes, medication. A person with diabetes can live a comfortable and healthy life.

Three types of diabetes include:

a) **Insulin Dependent** - The body does **not make any** insulin. Insulin injections are needed to control blood sugar levels.

b) **Non-Insulin Dependent** - The body does **not make enough** insulin or the insulin does not work properly. (This is the most common type among aboriginal people.) Diet alone, or diet with pills, or diet with insulin, and exercise are needed to control the blood sugar.
Eating a balanced diet, maintaining a healthy body weight, and being physically active may help to prevent development of diabetes, especially the non-insulin dependent type.

c) **Gestational** - This type can occur during pregnancy, but may not be permanent. Blood sugar must be controlled during pregnancy, since high blood sugar can harm the baby. The baby is not necessarily born with diabetes, but is at greater risk of developing diabetes later in life. The mother is also at risk of developing diabetes later in life.

In all types of diabetes, it is important to control daily blood sugar levels, in order to feel well and to prevent complications from developing later.

What are the symptoms of diabetes?

- hungrier than usual
- thirstier than usual
- urinating more often
- more tired than ususal
- undesired weight loss

Note: If two or more of these symtoms occur, see a doctor.

Dietary Needs: Choose a variety of traditional and market foods which provide many nutrients and little fat. Include fruits, vegetables, whole grain breads and cereals. A regular daily pattern of food and activity helps to maintain healthy body weight and control the symptoms of diabetes. Alcoholic beverages should be avoided: they are low in nutrients and some contain sugar, as well as alcohol.

Lactose Intolerance

What is Lactose Intolerance?

Lactose is a natural sugar found in milk. **Lactose Intolerance** is a condition where a person has stomach cramps and diarrhea after consuming milk, because he/she cannot digest lactose. Depending on the severity of the condition, the person may be able to tolerate small amounts of milk or milk products without feeling sick.

How can a person with lactose intolerance get calcium?

It is important for a person with lactose intolerance to eat other foods which contain calcium. These include fish heads and bones, seeds, bone soups, and canned fish with edible bones, such as canned salmon or sardines. Cheese and yogurt can usually be eaten, because the amount of lactose in these products has been reduced by processing. Ice cream and chocolate milk can be tolerated by some individuals, especially in moderate amounts. Calcium supplements can be helpful for those who are extremely lactose intolerant, but a doctor or nutritionist should be consulted first.

Some special products are available to help with this condition. **Lactaid**™ tablets can be taken along with regular milk or meals. Another way is to use **Lacteeze**™ products, which have already been treated to reduce the lactose. Unfotunately, Lacteeze products are generally more expensive than regular milk. Some people find cultured milks, such as acidophilus milk, helpful. Such products are available in most large grocery stores.

SPECIAL NEEDS THROUGH THE LIFECYCLE

The objectives of this section are:

1. To describe the special dietary needs during pregnancy.
2. To provide information about breastfeeding.
3. To provide information about formula feeding.
4. To describe ways of introducing solid foods to infants.
5. To describe the dietary needs of the elderly.

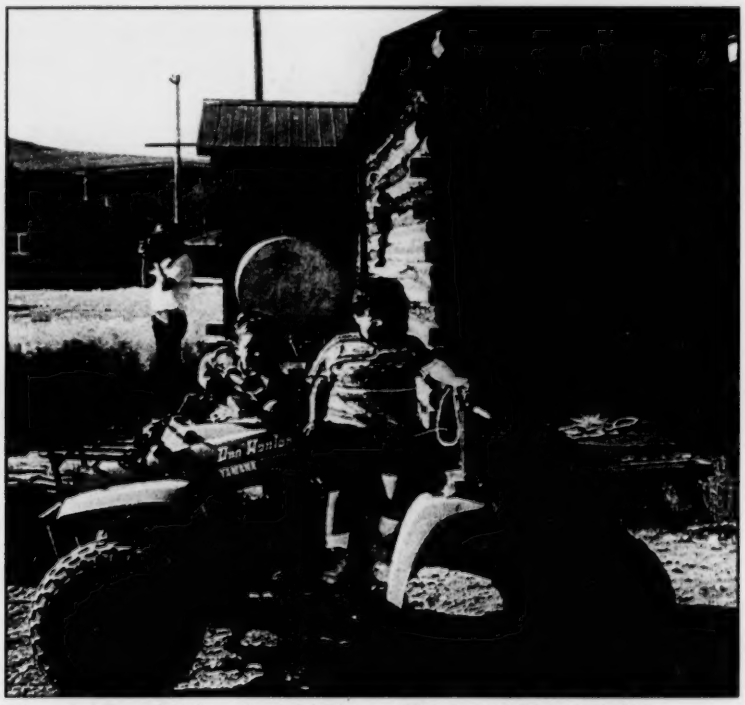


Figure 10. Children in Old Crow (Photo: V.M.Nardelli).

Pregnancy

During pregnancy, a woman's body requires more nutrients and energy, to build the tissues that support the baby, and to build up nutrient stores in preparation for breastfeeding. Good food choices will provide both mother and baby with the nutrients needed for growth and development.

A pregnant teenager has a greater challenge with respect to food intake. The teen's body is still developing; so she needs a diet rich in nutrients. She must provide both her body and the baby's with enough nutrients and energy for growth and development of both.

Increasing fluid intake such as fruit juice, milk and water is also important. Fluids also help to deliver nutrients to the baby and carry waste away.

More than four hours between meals should be avoided. Smaller meals and snacks should be eaten more often. Although the mother may not feel hungry, the baby still needs nourishment.

What do some nutrients do for my baby?

a) **Protein** - helps build blood, nerves, muscles, and brain cells
- helps mom to build stores for labour, delivery, and breast feeding

b) **Iron** - helps produce red blood cells

c) **Calcium** - helps strengthen bones and teeth
- helps mom build reserves for breast feeding

d) **Vitamin A** - helps develop healthy skin and membranes

e) **Vitamin C** - helps strengthen gums, blood vessels, bones, and teeth

f) **Vitamin D** - works with calcium to build strong bones and teeth

g) **Folate** - helps produce healthy red and white blood cells

h) **B Vitamins** - help promote normal appetite and build healthy skin and nerves
(thiamin, riboflavin, niacin)

Most nutrients can be obtained from a balanced diet. However, during pregnancy, many health professionals recommend certain vitamin supplements, particularly folate (Canadian Dietetic Association, 1995). Furthermore, in northern native communities where exposure to sunlight is limited, and some people do not use enough milk, supplemental vitamin D is recommended during pregnancy, breastfeeding and in winter (Canadian Paediatric Society, 1988). Consult a health professional for advice about the type and amount of supplement.

Special Considerations:

a) Alcohol - Intake at any time during pregnancy can have negative effects on the fetus and may cause **Fetal Alcohol Syndrome (FAS).** Some consequences of FAS are fetal growth deficiency, abnormal facial characteristics, and mental retardation.

b) Smoking - Smoking limits the blood supply of nutrients to the fetus, and harms the baby's growth and development.

c) Caffeine - Products containing caffeine such as coffee, tea, soft drinks, chocolate, and some medications should be consumed in moderation, if at all. Healthy intakes of caffeine during pregnancy have not been established.

d) Aspartame - Many "lite" or "diet" products contain sugar replacements such as aspartame. Such products are intended for weight loss, which should not be attempted during pregnancy. Healthy levels of aspartame intake during pregnancy have not been established.

Infant Feeding

Breastfeeding

Breastfeeding is a wonderful experience shared between mother and child. It is a convenient, simple, and natural way to feed a baby. Breast milk is the ideal source of food for a baby because it contains many nutrients necessary for growth and development. The colostrum (early secretion in the first few days after birth, before the mature milk) contains antibodies which help protect the baby from infection. This benefit is unique to breastfeeding.

The following remarks answer a few common questions about breastfeeding.

a) Drugs, alcohol and smoking affect breast milk adversely.

- Some drugs such as aspirin, laxatives, tranquilizers, and cough medicines pass to the baby through the breast milk.
- Alcohol and caffeine pass from the breast milk to the baby.
- Nicotine from smoking passes through breast milk to the baby. It may cause stomach cramps and vomiting.

b) The more often a baby is fed, the more milk is produced.

- As the baby grows bigger and takes more milk, the mother's body produces more.
- Breast milk is the only food that a baby needs for about the first 6 months.

c) The mother's diet affects the quality of her breast milk.

- An insufficient diet may result in a low milk production.
- A diet severely lacking in nutrients can lower the nutrient quality of the breast milk, although it usually does not affect the energy (calorie) content of the milk.

d) Extra fluids are needed while breastfeeding.

- More water, juice and milk are needed in order to produce breast milk.

e) Supplements of vitamin D are recommended.

The Canadian Paediatric Society (1988) recommends that in northern native communties, both nursing mothers and their breastfed infants should take supplemental vitamin D. The skin produces some vitamin D when exposed to sunlight; however, in the far north, the lack of daylight in winter, and the protective clothing required against insects in summer reduce the amount which can be produced this way; hence special recommendations apply to northern mothers and infants.

f) The mother should take extra good care of herself.

- Pregnancy, child birth, and breastfeeding require a great deal of energy; therefore, the mother should rest often.

- The natural weight gain of pregnancy provides a reserve for the even greater energy demands of lactation. The extra energy required to produce breastmilk for several months and to care for the baby normally cause the mother to lose the weight she gained during pregnancy. This natural process is another benefit of breastfeeding. No weight loss diets are needed.

- Breast milk can be expressed into a bottle so that the father or other family member can feed the baby occasionally, and give mom a change.

g) Weaning a baby to a bottle or cup can be done between age 6 months and 1 year.

- Replace one breastfeeding per day with a cup for a few days, then replace a second feeding per day for a few more days, etc, until the infant gradually becomes comfortable with the new feeding method.

- As breastfeeding becomes less frequent, the mother's milk supply will gradually decrease.

- Avoid giving a bottle of milk or juice to the baby as he/she is falling asleep, because this may cause tooth decay (cavities) in the front teeth.

Formula Feeding

Why feed with formula?

Breast milk is the ideal food for a baby, and the best method of feeding. It is also very convenient and economical. Most mothers can produce enough milk for their babies, especially if the baby is fed as often as he/she demands. Only when there are valid reasons to avoid breast feeding (such as alcohol consumption, illicit drug use, failure to thrive), should formula feeding be considered.

Prepared Formula is the best type.

Many types of prepared formula are available. They include ready-to-use and powdered forms. Prepared formula have been designed to be as close as possible to breast milk. It is important to prepare formula correctly for reasons of safety and nutrient value. Follow the instructions closely. Sometimes mothers may try to make a formula last longer by diluting it with water. This is harmful because the infant will not get enough energy and nutrients.

A mother who has decided to breastfeed should not use formula at an early stage, because this will decrease production of breast milk. However, after breastfeeding is well estabalished (e.g. after two months), formula can be used as an occasional alternative. Too frequent use of formula, however, will decrease the mother's own milk supply.

For more information about formula feeding, ask a nurse or health educator.

Home-made Formula - a last resort.

As a last resort, when neither breastfeeding nor purchasing prepared formula is possible, a formula can be made with evaporated milk. This type is the most unlike mother's milk.

Formula made with evaporated milk: (Reference: Medical Services Branch, 1994)

	Age 0-6 months	Age 7-12 months
Quantity of formula to make	600 mL	600 mL
Evaporated whole milk	200 mL	300 mL
Cooled boiled water	400 mL	300 mL
Sugar	30 mL	

Instructions:

1. Sterilize all utensils first in boiling water for 5-10 minutes.

2. Boil 800 mL of water in a covered sauce pan 10 minutes (for infants 0-6 months). Remove from heat and add sugar. Open a new 14 oz (400mL) can of regular evaporated milk (not 2%) and pour directly into the sauce pan. With sterilized spoon, stir the mixture. (For infants 7-12 months, use 400 mL water with one can of milk , and no sugar).

3. Pour formula into 5 large or 10 small sterilized baby bottles and refrigerate. Prior to feeding, place one bottle into hot water until the formula is luke warm. Pretest the formula on your wrist to ensure that it is not hot.

4. Discard the unfinished portion of formula remaining in the bottle.

Introducing Solid Foods to Infants

After 4 months of age or more, small amounts of soft-textured foods can be introduced, such as oatmeal, stewed fruits, soft mashed vegetables, and eventually small tender cuts of chicken or meat, along with continued breast milk or formula. Learning to eat from a spoon and to move solid food to the back of the mouth before swallowing is a new experience for a baby. In addition, infants have small stomachs; therefore, they need to eat often during the day.

Ages 4 to 6 months:

- infant cereals with added iron
- plain mashed vegetables (squash, peas, green/yellow beans)
- plain mashed fruit (bananas, applesauce)

Ages 7 to 9 months:

- increase mashed green, yellow, and orange-coloured vegetables and fruits. Colorful foods tempt the curiosity of children.
- cooked cereals, oatmeal, rice, noodles, and bannock
- soft-cooked finely cut poultry and mashed fish without the bones

Ages 10 to 12 months

- use whole (homogenized) milk rather than low fat milk in the first year
- offer fruit juice once the infant can drink from a cup
- avoid spicy foods and sauces
- egg white can be fed at 12 months of age, but may cause allergies if given earlier.
- avoid foods that may cause choking, such as nuts, seeds, popcorn, chips, and dry cereals

Older infants need a variety of traditional and market foods for growth. Foods that contain fat, sugar, or salt should be given only infrequently and in very small amounts. Foods containing alcohol or caffeine should not be given to infants.

If there is concern about a child being overweight, talk to a health professional. Children should not worry about weight-loss diets. They should eat a variety of healthy foods and be physically active.

If a child appears to be underweight and not growing normally, talk to a doctor or nurse. Try offering more snacks, such as dried salmon and pilot biscuits, or dried caribou or moose. A child should never feel hungry for any length of time.

Elders

As people get older, their food intake changes. Loss of appetite, lower taste sensation, and chewing and swallowing difficulties may affect what foods older people eat. In addition, some medications used by elders , such as diuretics, laxatives and antacids, may increase the need for particular nutrients which get "washed out of the body" before they are used.

Nutrition for the Elderly

1. **Fluids** - Water, juice, milk and soups provide nutrients and help prevent dehydration caused by medications.

2. **Fibre** - Elders need foods which contain fibre, in order to help prevent constipation. Many fresh vegetables and fruits are firm and fibrous, which make them difficult for elders to chew. Oatmeal, cooked fruit and vegetables are easier to eat, and provide fibre and other nutrients.

3. **Protein** - Protein is important for tissue repair.

4. **Calcium** - As a person gets older, bone mass decreases. Calcium helps to strengthen bones. After menopause, women in particular are at greater risk of developing osteoporosis; therefore, elders should eat foods containing calcium such as fish heads and bones, canned fish with edible bones, or milk products. Try adding Lacteeze milk to soups.

5. **Fat** - Eating too many foods high in fat can lead to overweight. As age increases, being overweight can increase risk of developing heart disease and diabetes.

6. **Vitamin A** - Dark green and yellow vegetables such as beans, spinach, carrots, squash, turnip and arctic dock contain vitamin A. These vegetables may be more acceptable to elders if they are softened by cooking. They can be added to soups and stews. Choose a variety for color, flavour, and nutrients.

7. **Vitamin C** - Many citrus fruits such as oranges, grapefruit, and tomatoes, and berries, such as strawberries, cranberries, and rosehips contain vitamin C. Stewed fruits and fruit juices may be more acceptable for those who have difficulty chewing or swallowing.

Making Food Easier to Eat

If there is difficulty chewing and/or swallowing, try the following to make foods easier to eat.

1. **Meat Products**

   - Cook moose and caribou in stews, or boil or roast meat to make it more tender.
   - Make ground moose and caribou, or cut the meat into fine strips.
   - Can fish.
   - Boil grouse, duck, or geese.

2. **Vegetables and Fruit**

   - Can, stew or steam vegetables and fruit such as berries, beans, tomatoes, and rhubarb.
   - Mash potatoes, turnips, carrots, and squash.
   - Make vegetable soup.
   - Add vegetables to stew, tomato sauce, and chili.
   - Drink fruit juice.
   - Chop food into bite size pieces.

3. **Grain Products**

   - Cook oatmeal, cornmeal, cream of wheat, and porridge
   - Cook rice or barley.
   - Add rice or barley to soups and stews.
   - Add pasta (macaroni, for example) to soups and stews.

4. **Milk Products**

   - Add grated cheese to salads or sandwiches.
   - Melt cheese on bannock.
   - Make a milk shake.
   - Eat ice cream for dessert.
   - Eat yogurt for dessert.

As an activity, encourage a group of elders to share ideas about foods that are easy to eat.

Summary of points to mention:

1. Many elders do not eat enough food. Perhaps the lack of taste or inability to chew and swallow easily is the reason. Although simple foods such as tea and bannock may satisfy hunger, they do not provide enough nutrients.

2. In order to provide the body with enough energy and nutrients for activities such as cooking, gardening, berry picking, and playing with grandchildren, it is very important to eat a variety of foods from the four food groups.

Photos on following page:

Figure 11. Florence Smarch of Teslin with smoked whitefish. (Photo: V.M. Nardelli)
Figure 12. Caribou meat - a source of protein, iron, zinc and B vitamins. (Photo: E.E. Wein)
Figure 13. The Smarch family garden in Teslin produces a variety of vegetables. (Photo: E.E. Wein)
Figure 14. People of all ages enjoy moose meat, as shown here by Kecia and Danny Kassi of Old Crow. (Photo: E.E. Wein)
Figure 15. Chinook salmon eggs. (Photo: R. Chambers)
Figure 16. Traditional and market foods served at a feast in Old Crow. (Photo: E.E. Wein)

Figure 11

Figure 16

Figure 15

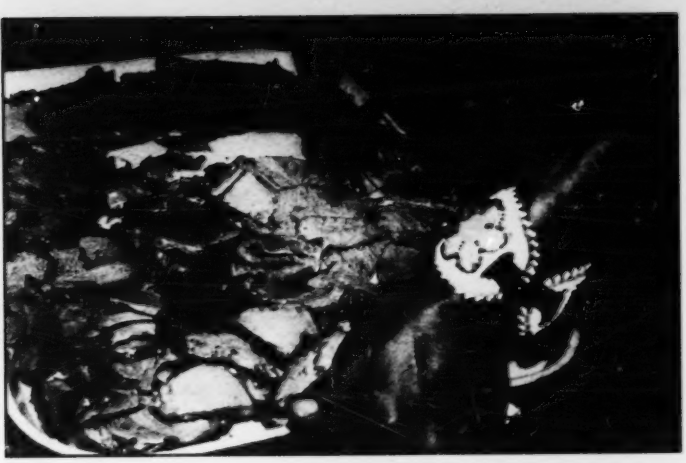
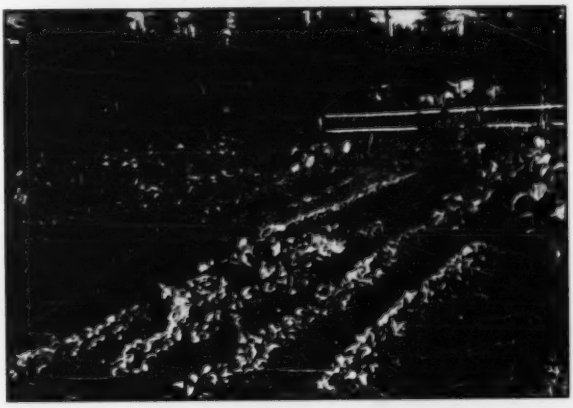


Figure 12



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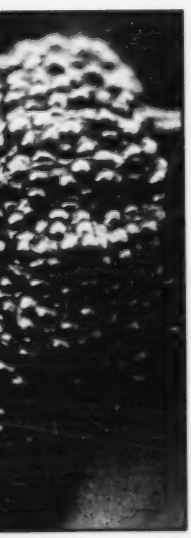

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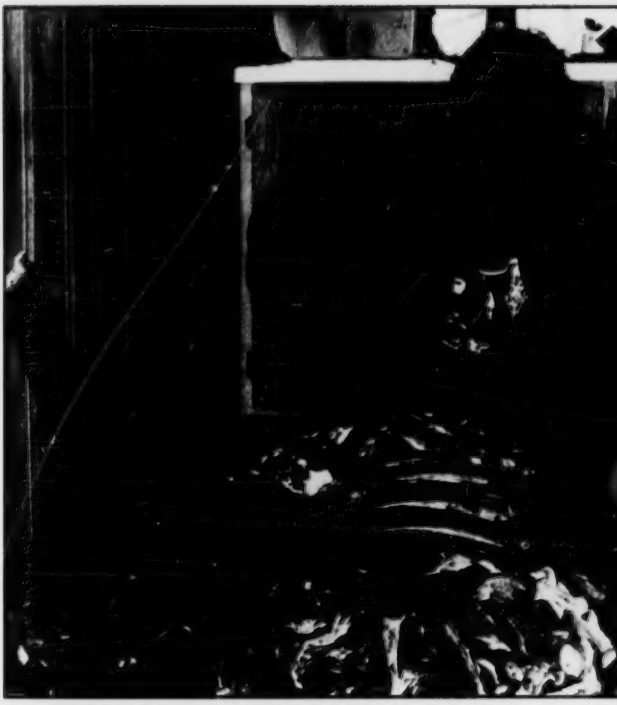

Figure 17

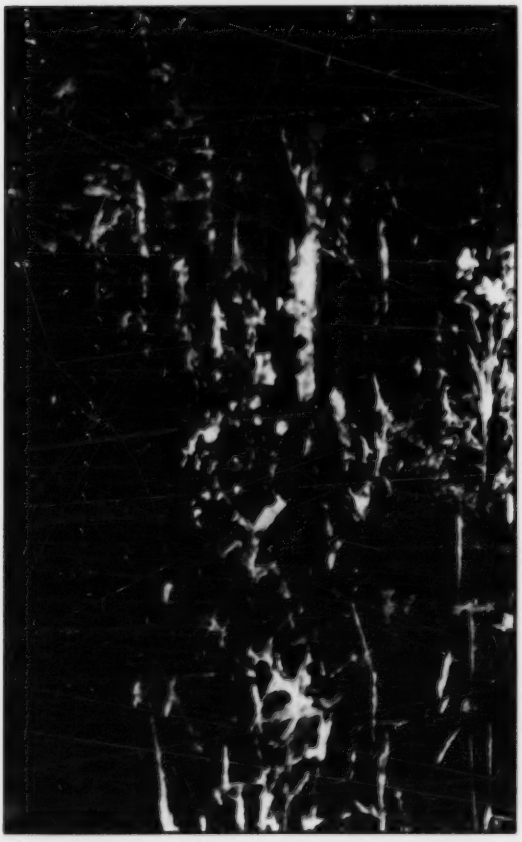

Figure 20

Figure 19

Figure 18

GAMES AND ACTIVITIES

The objective of this section is to provide "hands on" activities that will improve awareness and understanding of good food and nutrition practices.

Figure 21. Daniel Green with a salmon he caught at Klukshu. (Photo: V.M. Nardelli)

Photos on previous page:

Figure 17. Edith Josie of Old Crow cutting moose meat. (Photo: E.E. Wein)
Figure 18. Gopher (Arctic ground squirrel) - a traditional Southern Tutchone food. (Photo: R.W. Wein)
Figure 19. Leafy green vegetables provide vitamins A, C and folate. (Photo: E.E. Wein)
Figure 20. Fireweed shoots and leaves are a traditional source of vitamin C. (Photo: E.E. Wein)

Food Group Game

Objective: To illustrate the four food groups using traditional and market foods.

Materials:
- pencils or crayons
- poster paper
- ruler
- magazine or advertising flyers with food pictures
- glue

Activity:

1. Discuss the four food groups, illustrating examples of foods in each group.

2. Encourage participants to draw pictures of their favourite traditional foods.

3. Encourage the group to cut out pictures of market foods.

4. Divide a large sheet of paper into four sections. At the top of each section list one food group:
   a) Milk and Calcium Products
   b) Meat and Alternatives
   c) Grain Products
   d) Vegetables and Fruit

5. Encourage participants to group the magazine and hand-drawn pictures under each section on the poster. Before you glue the pictures onto the poster, check that the food groups are correct. (Compare to a food guide).

6. Use the **Food Group Review** form as a tool to evaluate knowledge. Use the **General Evaluation** sheet (last page of this section) to evaluate interest level and presentation of the topic.

Summary of points to mention:

1. Eat foods from each of the 4 food groups every day.

2. Include foods with different colours and textures. Eat a variety of foods every day.

3. Eat food in moderation, rather than too much or too little. This contributes to balance.

4. **Variety + Balance + Moderation = Healthy Eating**

Food Group Review

1. What are the four food groups?
2. Give three examples of recommended foods in each group. Include traditional foods as much as possible.

Food Group 1. _____ Example 1._____

Example 2. _____

Example 3. _____

Food Group 2. _____ Example 1. _____

Example 2. _____

Example 3. _____

Food Group 3. _____ Example 1. _____

Example 2. _____

Example 3. _____

Food Group 4. _____ Example 1. _____

Example 2. _____

Example 3. _____

3. _____ + _____ + _____ = Healthy Eating

Nutrient Bingo

Objective: To increase awareness of the nutrient content of some traditional and marke t foods.

Materials: - Bingo markers (dried beans, buttons or pennies)
- Prize for winners (Examples: box of cereal, bag of potatoes, oranges, apples, turnip, canned or powdered or UHT milk, can of beans, corn, peaches).

Activity:

1. Make copies of each of the five bingo cards in the book. The Master Card is used by the educator. Distribute one bingo card to each player.

2. Each player should have at least 20 bingo markers. The educator should have at least 36.

3. Make a copy of the "Bingo Game Sheet" (following page). Cut along the lines provided and put the paper pieces in an empty container or jar. Randomly select one piece of paper and read it to the group: Example; "Under Vitamin C, Oranges". Instruct the group to place a bingo marker in the box with that item. Remember to separate the called items away from the remaining ones in the container to prevent repetition. The paper pieces can be reused for future games.

4. Once a diagonal or horizontal row is filled, someone has won the game and should shout "BINGO". Diagonal or horizontal lines represent variety in the diet. Repeat the game until all the prizes are given out.

5. Distribute a copy of the **Bingo Handout** (page 46) which summarizes the functions and sources of the nutrients.

6. Distribute a copy of the **Fireweed Potato Salad** recipe (page 47) for those interested.

BINGO GAME SHEET

Instructions: Cut along lines provided and put labelled paper pieces into an empty con tainer. Select one piece at a time and read the contents aloud. (eg: Under Vitamin C, Oranges.)

Vitamin C Oranges	**Fibre** Blue-berries	**Vitamin A** Carrots	**Calcium** Milk	**Vitamin D** Fish Eggs	**Folate** Spinach
Vitamin C Bear Root	**Fibre** Oatmeal	**Vitamin A** Caribou Liver	**Calcium** Sunflower Seeds	**Vitamin D** Milk	**Folate** Oranges
Vitamin C Rosehips	**Fibre** Beans	**Vitamin A** Moose Liver	**Calcium** Fish Heads and Bones	**Vitamin D** Margarine	**Folate** Cabbage
Vitamin C Fireweed Leaves	**Fibre** Whole Wheat Bannock	**Vitamin A** Dandelion Leaves	**Calcium** Cheese	**Vitamin D** Salmon	**Folate** Beans
Vitamin C Cran-berries	**Fibre** Black-berries	**Vitamin A** Milk	**Calcium** Ice Cream	**Vitamin D** Moose Liver	**Folate** Swiss Chard
Vitamin C Straw-berries	**Fibre** Apples	**Vitamin A** Corn	**Calcium** Chocolate Milk	**Vitamin D** Bird Eggs	**Folate** Beets

Nutrient Heading: **Master Card**

VITAMIN C	FIBRE	VITAMIN A	CALCIUM	VITAMIN D	FOLATE
Oranges	Blue-berries	Carrots	Milk	Fish Eggs	Spinach
Bear Root	Oatmeal	Caribou Liver	Sunflower Seeds	Milk	Oranges
Rosehips	Beans	Moose Liver	Fish Head and Bones	Margarine	Cabbage
Fireweed Leaves	Whole Wheat Bannock	Dandelion Leaves	Cheese	Salmon	Beans
Cran-berries	Black-berries	Milk	Ice Cream	Moose Liver	Swiss Chard
Straw-berries	Apples	Corn	Chocolate Milk	Bird Eggs	Beets

Summary of points to mention:

1. Many of the foods are found under more than one nutrient heading. This demonstrates that many foods contain more than one nutrient and some foods share common nutrients.

2. When choosing foods, keep in mind that a variety of food sources provides the body with the nutrients needed for growth, development, and energy.

3. Remember that all nutrients depend on each other to get the job done. If one nutrient is missing or too limited in the diet, this will affect the work of the others. This is another reason why a variety of foods is so important for good health.

Card #1

VIT. C	FIBRE	VIT. A	CALCIUM	VIT. D	FOLATE
Cran-berries	Whole Wheat Bannock	Caribou Liver	Ice Cream	Moose Liver	Beets
Oranges	Beans	Milk	Sunflower Seeds	Fish Eggs	Swiss Chard
Rosehips	Apples	Carrots	Milk	Milk	Oranges
Fireweed Leaves	Oatmeal	Moose Liver	Cheese	Salmon	Spinach
Bear Root	Blue-berries	Dandelion Leaves	Fish Head and Bones	Margarine	Cabbage

Card #2

VIT. C	FIBRE	VIT. A	CALCIUM	VIT. D	FOLATE
Rosehips	Beans	Moose Liver	Cheese	Margarine	Cabbage
Straw-berries	Oatmeal	Carrots	Fish Head and Bones	Salmon	Spinach
Bear Root	Whole Wheat Bannock	Milk	Ice Cream	Bird Eggs	Beans
Cran-berries	Black-berries	Caribou Liver	Milk	Fish Eggs	Oranges
Fireweed Leaves	Blue-berries	Fireweed Leaves	Sunflower Seeds	Moose Liver	Swiss Chard

Card #3

VIT. C	FIBRE	VIT. A	CALCIUM	VIT. D	FOLATE
Rosehips	Black-berries	Milk	Sunflower Seeds	Salmon	Swiss Chard
Fireweed Leaves	Blue-berries	Moose Liver	Milk	Moose Liver	Beans
Cran-berries	Oatmeal	Carrots	Fish Head and Bones	Fish Eggs	Spinach
Bear Root	Beans	Corn	Ice Cream	Milk	Cabbage
Oranges	Whole Wheat Bannock	Caribou Liver	Cheese	Margarine	Oranges

Card #4

VIT. C	FIBRE	VIT. A	CALCIUM	VIT. D	FOLATE
Fireweed Leaves	Whole Wheat Bannock	Dandelion Leaves	Fish Head and Bones	Milk	Salmon
Cran-berries	Black-berries	Moose Liver	Cheese	Margarine	Moose Liver
Oranges	Oatmeal	Milk	Sunflower Seeds	Salmon	Spinach
Bear Root	Blue-berries	Caribou Liver	Milk	Fish Eggs	Caribou Liver
Rosehips	Rhubarb	Carrots	Chocolate Milk	Moose Liver	Beans

Card #5

VIT. C	FIBRE	VIT. A	CALCIUM	VIT. D	FOLATE
Bear Root	Whole Wheat Oatmeal	Carrots	Milk	Fish Eggs	Spinach
Rosehips	Bannock	Dandelion Leaves	Ice Cream	Milk	Cabbage
Fireweed Leaves	Black-berries	Moose Liver	Sunflower Seeds	Bird Eggs	Swiss Chard
Oranges	Blue-berries	Milk	Cheese	Moose Liver	Beets
Cran-berries	Beans	Caribou Liver	Fish Head and Bones	Salmon	Oranges

Figure 22. Only some brands of fruit crystals contain vitamin C. Check the label (Photo: V.M. Nardelli)

Bingo Handout

Post this chart on your refrigerator so that your family can see the functions and food sources of some nutrients that their bodies need.

Eat foods that have high nutrient value. Use this chart as a guide. Add other fruits, vegetables, whole grain breads and cereals, milk, lean meat and fish for variety.

VITAMIN C	**FIBRE**	**VITAMIN A**	**CALCIUM**	**VITAMIN D**	**FOLATE**
- keeps teeth & gums healthy	**-prevents constipation** **-maintains blood sugar levels**	**-fights infection** **-maintains vision**	**- builds bones & teeth** **- helps blood clot**	**- helps absorb calcium**	**- helps make new red blood cells**
Bear Root	Oatmeal	Caribou Liver	Sunflower Seeds	Milk	Oranges
Rosehips	Beans	Moose Liver	Fish Head and Bones	Margarine	Cabbage
Fireweed Leaves	Whole Wheat Bannock	Dandelion Leaves	Cheese	Salmon	Beans
Cran-berries	Black-berries	Milk	Ice Cream	Moose Liver	Swiss Chard
Straw-berries	Apples	Corn	Chocolate Milk	Bird Eggs	Beets
Oranges	Blue-berries	Carrots	Milk	Fish Eggs	Spinach

Fireweed Potato Salad

1/2 cup	fireweed leaves	125 mL
3 cups	diced potatoes	375 mL
3/4 cup	plain yogurt	175 mL
1/2 cup	mayonnaise	125 mL
1/2 cup	chopped celery	125 mL
1/4 cup	diced green pepper	60 mL
1 tsp	dry dill	1 mL
1 tsp	parsley flakes	1 mL

1. Boil the potatoes until cooked and allow to cool.
2. Cut the potatoes into bite size cubes.
3. Mix yogurt, mayonnaise, dill and parsley.
4. Add potatoes, fireweed leaves, celery and green pepper.
5. Store in the refrigerator until ready to serve.

Adapted from: Walker, 1984

Calcium Tips

Objective: **To increase understanding of the role of calcium and its food sources.**

Materials: none

Activity:

1. Discuss the market foods which contain calcium.
2. Discuss the traditional foods which contain calcium.
3. Discuss how foods with calcium can be added to favourite dishes.
4. See below for other ideas to share. The recipes can be copied as handouts.

Adding Calcium To Our Meal Can Be Fun!

1. Use liquid or powdered milk instead of water when making bannock or doughnuts.
2. Add milk to canned soup instead of water.
3. Add milk to macaroni and cheese dinner.
4. Add milk or milk powder to coffee instead of whitener.
5. Melt some cheese over steamed vegetables.
6. Add a slice of cheese to pilot biscuits.
7. Eat the bones of canned fish.
8. Add sunflower seeds to cooked oatmeal.
9. Choose chocolate milk instead of pop.
10. Try hot cocoa made with milk instead of water.
11. Add milk or milk powder to mashed potatoes.
12. Add grated cheese to pastas, casseroles or salads.
13. Add milk to rice pudding.
14. Choose yogurt or ice cream for dessert or snack.

Cooking with Calcium

Quick and Easy Casserole

3/4 cup	brown rice	175 mL
2 cups	water	500 mL
1 cup	plain yogurt	250 mL
1 cup	shredded Mozzarella cheese	250 mL
1/2 cup	2% cottage cheese	125 mL
1/2 cup	chopped onion	125 mL
1/4 cup	chopped mushrooms	50 mL
1/4 cup	chopped green pepper	50 mL
1/4 tsp.	salt	2 mL
1/4 tsp.	ground pepper	1 mL
1/2 tsp.	garlic chopped	2 mL

1. In a large saucepan, boil rice in water. Cover and cook at a low temperature until the rice is tender. Set aside.

2. While the rice is hot, stir in the yogurt, Mozzarella and cottage cheese, onion, mushrooms, green pepper, garlic, salt, and papper.

3. Put the mixture into a slightly greased casserole dish. Cook for 25 minutes, uncovered in a 350°F (180°C) oven. Makes 6 servings.

Adapted from: Bishop MacDonald and Howard, 1990

My Favourite Salmon Chowder

1 pound	salmon or other fish	500 g
1/2 cup	chopped carrots	125 mL
1/3 cup	chopped onion	75 mL
1/3 cup	chopped red pepper	75 mL
2 cups	diced potatoes	500 mL
2/3 cup	water	150 mL
2 tsp	salt	10 mL
3 cups	milk	750 mL
1 1/cup	corn	375 mL
3 Tbsp	flour	45 mL
1 1/4 cup	cream or evaporated milk	300 mL
1 tsp	pepper	5 mL
1 tbsp	margarine	45 mL
1 tbsp	parsley	45 mL

1. Cut fish into small pieces.

2. Saute onion in margarine in a large sauce pan.

3. Add potatoes, carrots, red pepper, fish, water and salt. Bring to a boil.

4. When it comes to a boil, reduce heat and cover until potatoes and fish are cooked. Stir in milk and corn.

5. Combine flour and cream (or evaporated milk, for lower fat content) before adding to mixture. Cook over medium heat and stir until mixture just comes to a boil and thickens. Makes about 7 1/2 cups (1.75 L)

Adapted from: The Ontario Milk Marketing Board, 1990

Fibre Everyday!

Objective: To increase awareness of the role of fibre and its sources in order to increase dietary intake of fibre.

Materials: none

Activity:

1. Discuss the traditional and market foods which are good sources of fibre.

2. Discuss how fibre can be added to the diet using both traditional and market foods.

3. **"Making Fibre a Part of Every Meal"** (next page) includes tips about how to increase fibre in meals or snacks. This sheet can be copied as a handout. The recipes can also be copied as handouts.

4. Use **Fibre Review** form and the **General Evaluation** (at end of this section) to evaluate what was learned.

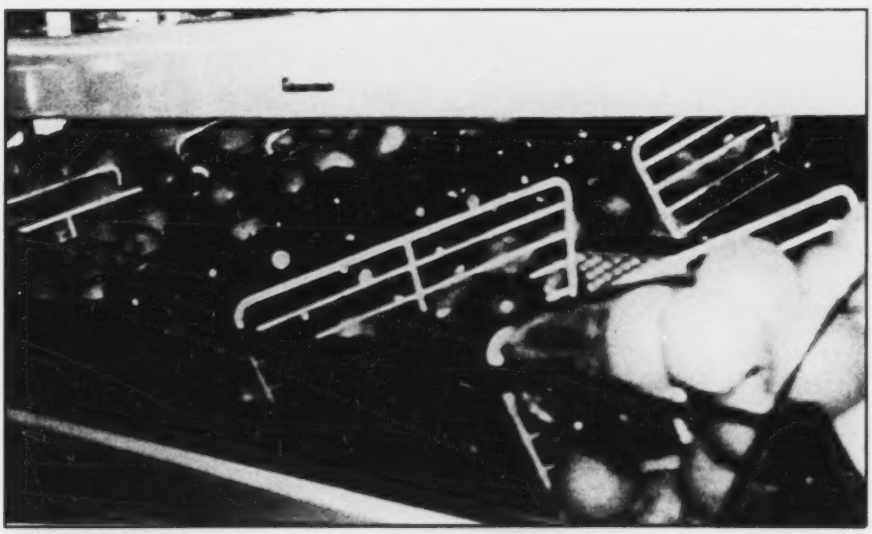

Figure 23. Fresh fruit provides some fibre along with vitamin C. A variety of fresh fruit is available at the Nisutlin Trading Post in Teslin.

Making Fibre a Part of Every Meal

1. Add dried berries, oatmeal, and/or bran to bannock.
2. Replace half of the flour for bannock with whole wheat flour, bran or oatmeal.
3. Add grated carrots or apples to muffins or bannock.
4. Crumble a handful of bran flake cereal or rolled oats on top of casseroles, pasta or macaroni and cheese dinners.
5. Add some cooked vegetables to spaghetti sauce.
6. Have an apple slice with a pilot biscuit.
7. Add some fresh or dried berries to cereal.
8. Add bran or oatmeal to ground beef.
9. Add beans, peas or lentils to stews and chili.
10. For a low fat snack with fibre, try fig bars.
11. Oatmeal cookies are a sweet source of fibre.
12. Add a fresh tomato to salads or sandwiches.
13. Eat dried fruit or berries for a snack.
14. Eat the skin of fruits and potatoes.
15. Eat a fruit instead of drinking a glass of juice.
16. As a thickener, add oatmeal to duck or goose soup.

Summary of Points to Mention:

1. In order to maintain balance, include a source of fibre in every meal and snack.

Cooking with Fibre

Hearty Carrot Muffins

1 1/4 cups	whole wheat flour	300 mL
1 1/4 cups	bran cereal	300 mL
1 tsp	baking powder	5 mL
1 tsp	baking soda	5 mL
2 tsp	cinnamon	5 mL
1/2 tsp	allspice	2 mL
1/2 tsp	salt	2 mL
2	eggs	2
1 cup	grated carrots	250 mL
3/4 cup	milk	175 mL
1 tsp	vinegar	5 mL
1/3 cup	brown sugar	75 mL
1/4 cup	vegetable oil	50 mL
1/4 cup	sunflower seeds	50 mL
1/4 cup	raisins	50 mL

1. Combine in a large bowl, flour, cereal, baking powder, baking soda, cinnamon, salt, and allspice. Set aside.

2. In a different bowl, mix sugar, oil, eggs, and carrots. In a measuring cup, combine the milk and vinegar, then add to mixture.

3. Add the dry ingredients to the second bowl and mix. Add the seeds and raisins.

4. Spoon the batter into muffin tins lined with paper baking cups. Bake for 20 minutes at 400°F (200°C). Makes 1 dozen muffins.

Adapted from Bishop MacDonald and Howard, 1990

Grandma's Cranberry Muffins

1 cup	rolled oats	175 mL
1 1/2 cups	whole wheat flour	375 mL
1 cup	brown sugar	250 mL
2 tsp	baking powder	10 mL
1/2 tsp	salt	2 mL
1/2 tsp	cinnamon	2 mL
1/2 cup	margarine	125 mL
1 1/2 cups	chopped cranberries	375 mL
2 tsp	orange juice	10 mL
2/3 cup	milk	150 mL
1	egg	1

1. Combine oats, flour, sugar, baking powder, cinnamon and salt.

2. Blend margarine into this dry mixture until it crumbles.

3. Add cranberries.

4. In another bowl, mix the orange juice, milk and egg together.

5. Then add the mixture of liquids to the dry mixture.

5. Spoon into lightly greased or teflon muffin tins which have been lined with paper. Bake for 20 - 25 minutes at 400°F (200°C).

Adapted from: Bishop Macdonald and Howard, 1990

Filling up on Fibre

Objective: To demonstrate how to make healthy choices which are high in fibre.

Materials: - copies of the **"Fibre Game"**
- pencils or pens

Activity:

1. Distribute copies of the **"Fibre Game".**
2. Read each question and the choices of answers to the group.
3. Encourage group members to circle their answers on their copy of the game.
4. Draw the chart below onto a board or flip chart which the group can see.
5. Encourage the group to count the number of a's, b's, c's and d's that they have circled and record the numbers on the chart.

Numbers Chosen by the Group

Questions

CHOICE	#1	#2	#3	#4	#5	TOTAL
A						
B						
C						
D						

6. Read the following to the group:

   - If you answered mostly a's and c's, congratulations! You are making very healthy choices.

   - If you answered mostly b's and d's, you may want to slowly increase your dietary fibre by eating more fruit, vegetables, and whole grain breads and cereals. Discuss some foods which you think are high in fibre. (Examples: oat bran cereals, blackberries, raspberries, blueberries, whole wheat bread, Red River cereal, etc.)

Summary of Points to Mention:

1. The game provides only some examples of food choices which are high in fibre. Many of the food choices in the questions contain fibre, however only some contain large amounts.

2. It is very easy to add fibre to the diet (refer to the activity Fibre Everyday). Increase dietary fibre slowly and drink more fluids such as water, milk, or fruit juice, to help the body handle the increased bulk.

3. Increasing dietary fibre helps the digestive system maintain regularity and reduces the risk of certain diseases.

The Fibre Game

The **Fibre Game** provides food options for meals or a snacks. Many choices are similar in nutrient value, but differ in fibre content. Fibre is found in fruits, vegetables, whole grain breads and cereals. Choosing foods high in fibre may be a challenge, but this game will help you become more aware of the healthier choices. **Good luck!**

1. For breakfast you enjoy eating...

    a. oatmeal and milk
    b. coffee
    c. a bran muffin
    d. a danish

2. For dessert you enjoy eating ice cream in a bowl. To the ice cream you add...

    a. blackberries
    b. chocolate sauce
    c. an oatmeal cookie
    d. whipped cream

3. For a snack you eat...

    a. cooked blueberries with a piece of bannock
    b. apple juice and a buttered pilot biscuit
    c. an apple
    d. tea and a doughnut

4. For supper you cook some roast caribou and...

    a. baked beans
    b. instant mashed potatoes
    c. baked potatoes with the skin
    d. fries and gravy

5. For a salad in a restaurant, you order...

    a. fresh carrots and broccoli with dip
    b. macaroni salad
    c. bean salad
    d. lettuce salad

Fibre Review

Give five good sources of dietary fibre.

1. _____

2. _____

3. _____

4. _____

5. _____

Give three reasons why dietary fibre is important.

1. _____

2. _____

3. _____

Cutting Down on Total Fat

Objective: **To demonstrate how to make healthy choices involving low fat meals and snacks.**

Materials: - copies of the **"Total Fat"** quiz.
- pencils or pens

Activity:

1. Distribute a copy of the **"Total Fat"** quiz.
2. Read each question and the choice of answers to the group.
3. Encourage the group to circle their answers on their copy of the game.
4. Draw the chart below onto a board or flip chart which the group can see.
5. Encourage the group to count the number of a's, b's, c's and d's that they have circled and record the numbers on the chart so the group can see how they scored.

Numbers Chosen by the Group

Questions

CHOICE	#1	#2	#3	#4	#5	TOTAL
A						
B						
C						
D						

6. Read the following to the group:
   - If you answered mostly a's and c's, congratulations! You are making very healthy choices. Keep up the good work.
   - If you answered mostly b's and d's, you may want to decrease total dietary fat by choosing foods which contain little or no added fat.
7. Use the **Fat Review** sheet and the **General Evaluation** sheet (at end of this section) to evaluate what was learned.

Summary of Points to Mention:

1. Choosing foods which are low in fat may help to reduce the risk of heart disease.

2. Remember that children require many "healthy choice" foods in order to grow and develop. Children need foods with high nutrient value rather than foods that contain only a lot of fat and sugar.

3. Keep in mind that the quiz is trying to illustrate the healthiest choice. Although many food choices in the quiz contain valuable nutrients, some foods contain more added fat than others. An important part of healthy eating involves cutting down on total fat.

4. When choosing foods from a menu, consider how the food was prepared. Many restaurant foods are deep fat fried and are soaked in gravy. Choose foods which are lower in total fat, such as roasted, baked or grilled meats. Ask for salad dressing on the side, to let you control the amount of fat on your salad.

Total Fat Quiz

The **purpose** of the **Total Fat Quiz** is to show foods which are similar in nutrient value but differ in total fat. A major difference is the extra fat added during preparation. This quiz is intended to increase your knowledge of choices that will cut down your total fat intake.

When you answer each question, consider why you chose that particular food. No answer is wrong; however, some answers may be healthier. **Good luck!**

1. When you are at a restaurant for supper, you decide to order..

    a. roast beef with mixed vegetables and a baked potato
    b. french fries with gravy
    c. spaghetti in tomato sauce
    d. fried chicken nuggets and dipping sauce

2. You are not very hungry for breakfast, but you decide to eat...

    a. cereal with milk
    b. waffles and syrup
    c. toast with jam
    d. a doughnut

3. While you are preparing supper, you snack on...

    a. dried salmon
    b. chocolate bar
    c. fresh vegetables
    d. potato chips

4. For an evening snack, you enjoy eating...

    a. air popped popcorn
    b. potato chips
    c. pilot biscuit and a slice of cheese
    d. deep fried bannock

5. For lunch you enjoy eating....

    a. leftover roast moose meat sandwich and salad
    b. battered fish and chips from the store
    c. vegetable soup with baked bannock
    d. fried moose meat and hash browns

Fat Review

1. List three ways we can cut down on the total fat we eat.

   a. _____

   b _____

   c. _____

2. Name three pairs of similar kinds of foods, where one is high in fat and one is low in fat (e.g. sour cream is high in fat, yogurt is lower in fat).

	High Fat	vs	Lower Fat
a.	_____		_____
b.	_____		_____
c.	_____		_____

3. Name three ways to lower the amount of fat used in food preparation.

   a. _____

   b. _____

   c. _____

4. Too much fat increases risk of what conditions?

_____ _____ _____

Learning from Elders

Objective: To educate children about the various uses of traditional foods practiced by elders.

Materials: - fresh or canned fruit and/or vegetables to give as a gift to the elder

Activity:

1. Invite an elder from the community to be a guest in your classroom.

2. Ask the elder to speak to the children about preparation and preservation methods of traditional foods, as done in the past and at present times.

3. Afterward, encourage the children to tell a short story about how their parents and grandparents prepare and preserve food. Encourage the children to draw a picture of the method to go along with the story.

4. Present the gift and thank the elder for the visit.

Summary of points to mention:

1. Asking an elder to share stories about traditional foods may encourage young people to take pride in their traditions and to maintain these practices.

The Snacking Game

Objective: **To encourage healthy snacks using both traditional and market foods.**

Materials: - none or food examples from below if facilities permit

Activity:

1. Encourage the group or individual to share a favourite snack food.
2. Discuss whether the snack food is a traditional or market food and to which food group it belongs.
3. Discuss how to include more traditional foods as snacks.
4. Share the list of **Healthy Snacks** provided below.
5. Discuss why each food on the list below is a healthy choice, and for whom it is suitable.

Summary of points to mention:

1. Choose snacks that are low in fat and high in fibre.
2. Combine foods from more than one food group. (An example is fruit and cheese.)
3. Remember that many market foods such as potato chips and pop contain a lot of fat, or sugar, and salt, which is not healthy. If you choose these foods, share them with a friend so that you divide the amount.
4. Including traditional foods as part of daily snacks will provide your body with many nutrients.

Healthy Snacks

1. Dried caribou or moose
2. Cheese melted on baked bannock
3. Fresh berries
4. Apple juice or other fruit juice.
5. Fruit crystals enriched with vitamin C: examples include Tang or Quench. Check the label for added vitamin C on other brands. (Fruit crystals contain more sugar than natural juices, and are therefore less nutritious; however, they are also less expensive and more convenient when refrigeration is not available.)
6. Home-made milkshake with berries
7. Dried salmon
8. Cooked or dried berries
9. Oatmeal cookies
10. Fresh or dried fruit
11. Canned or dried salmon and pilot biscuits
12. Home-made popcorn seasoned with your favourite spice instead of too much added fat
13. Peanut butter sandwich

Community Action

Objective: To increase physical activity through community participation.

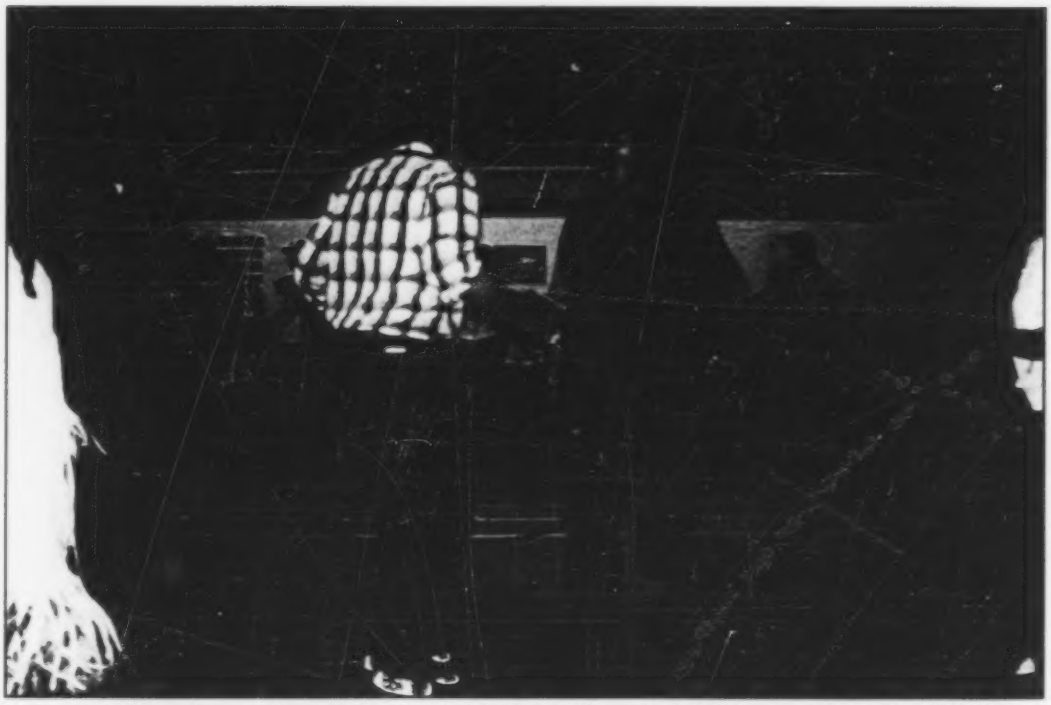

Figure 24. Dancing - a fun way to be physically active. (L to R, Steven Frost Sr., Kias Peter and Cheryl Charlie). See activity 3 next page. (Photo: E.E. Wein)

Activity # 1: Activity Day

1. Choose a specific day to promote **Activity Day.**

2. Encourage everyone in the community to do an extra physical activity that particular day. Some examples include:

- Walking
- Dancing
- Swimming
- Jigging
- Baseball
- Berry picking
- Fishing
- Sports

Activity # 2: Community Walkathon

1. Encourage other community service workers such as teachers, nurses, and social workers to advertise the **Community Walkathon**. People participating in the walkathon should make up teams of 2 or 3.

2. As a community, decide upon the distance and location of the walkathon. Challenge a neighbouring community to see who can have the most participants.

3. Encourage each participant to donate one can of fruit or vegetables as an entry fee. The team that finishes first place will win the food that was donated.

Activity # 3: Community Dance-athon

1. Encourage community members of all ages to participate in a **Community Dance-athon.** Participants should have a dancing partner.

2. Reserve a community hall or school gym for the location. Encourage each couple to donate a can of fruit or vegetables as an entry fee.

3. The dance-athon should be scheduled for 12 hours with 10 minute breaks every hour and one 30 minute break after 6 hours for refreshments.

4. The team that can dance the longest without stopping, (except for the designated breaks) wins the donated canned food.

Activity # 4: Community Clean Up

1. Encourage young community members to donate some of their time by helping the elders of the community with household activities. Some examples of household activities include:

   - removing weeds from the garden
   - house cleaning
   - mowing the lawn
   - baking bannock
   - preparing a meal
   - chopping firewood
   - shovelling snow
   - carrying laundry

Activity # 5: Sofa Aerobics

1. This is a great activity for those persons who are limited to minimal levels of physical activity such as some elders. Do each activity for 2 minutes.

2. Instructions: While you are sitting...

   a) Stretch for the sky with the right hand.

   b) Stretch for the sky with the left hand.

   c) Stretch for the sky with both hands.

   d) Wiggle the toes of your right foot.

   e) Wiggle the toes of your left foot.

   f) Move your right ankle in a circular motion.

   g) Move your left ankle in a circular motion.

   h) Straighten and bend your right leg 3times.

   i) Straighten and bend your left leg 3 times.

   j) Relax, and drink some water. You have just completed **Sofa Aerobics!**

General Evaluation for Games and Activities

To the educator: Use this **General Evaluation** as a tool to evaluate the effectiveness of the games and activities, and as guide for making improvements for future use.

To the participant -

* What did you learn from this activity?

* What did you like the MOST about this activity?

* What did you like the LEAST about this activity?

* How would you improve this activity?

ADDITIONAL RESOURCES

For additional nutrition education materials, contact the organizations listed.

B.C. Heart & Stroke Foundation
1212 West Broadway
Vancouver, B.C V6H 3V2
Phone: (800) 663-2010

Canadian Cancer Society
103-107 Main Street
Whitehorse, Yukon, Y1A 2A7
Phone: (403) 668-6440

Dairy Nutrition Council of Alberta
14904-121A Avenue
Edmonton, Alberta, T5V 1A3
Phone: (403) 453-5942

Council for Yukon First Nations
Health and Social Development Program
Booklet: Food from the Land; Health for the Mind, Body and Spirit.
11 Nisutlin Drive
Whitehorse, Yukon Y1A 3S4
Phone: (403) 667-7631
Fax: (403) 668-6577

Health Education Associates Inc.
Pamphlet: "How to Nurse Your Baby"
8 Jan Sebastian Way
Sandwich, MA 02563
Phone: (508) 888-8044

First Nation Health Program Manager
Yukon Region
Medical Services Branch
Health Canada
#2 Hospital Road
Whitehorse, Yukon Y1A 3H8
Phone: (403) 393-6770
Fax: (403) 393-6772

Nutritionist
Whitehorse General Hospital
5 Hospital Road
Whitehorse, Yukon Y1A 3H7
Phone: (403) 667-8700

First Nations Health Program
Whitehorse General Hospital
5 Hospital Road
Whitehorse, Yukon Y1A 3H7
Phone: (403)667-8780

REFERENCES

Bishop MacDonald, H. and Howard, M. Eat Well Live Well: The Canadian Dietetic Association's Guide to Healthy Eating, Toronto: Macmillan of Canada, 1990.

Canadian Paediatric Society, Indian and Inuit Health Committee. Vitamin D supplementation for northern native communities. Canadian Medical Association Journal 138: 229-230, 1988.

Canadian Dietetic Association. Report of the national workshop on the primary prevention of neural tube defects. Journal of the Canadian Dietetic Association 56: 167-172, 1995.

Council for Yukon Indians. Food from the Land; Health for the Mind, Body and Spirit. Whitehorse: c1989.

McClellan, C. Part of the Land, Part of the Water. A History of the Yukon Indians. Vancouver: Douglas & McIntyre, 1987.

McClellan, C. My Old People Say. An Ethnographic Survey of Southern Yukon Territory. Part 1. National Museum of Man, Publications in Ethnology, No. 6(1). Ottawa: National Museums of Canada, 1975.

Medical Services Branch. Native Foods and Nutrition: An Illustrated Reference Manual. Ottawa: Health Canada, 1994.

The Ontario Milk Marketing Board. Cook Milk in Any Flavour You Like. Mississauga: 1990.

Walker, M. Harvesting the Northern Wild. Yellowknife: The Northern Publishers, 1984.

Wein, E.E. Yukon First Nations Food and Nutrition Study: Report to the Champagne and Aishihik First Nations, the Teslin Tlingit Council, the Vuntut Gwich'in First Nation, the Yukon Dept. of Health, and the National Institute of Nutrition. Edmonton, Alberta. Canadian Circumpolar Institute, University of Alberta, 1994. (Copies available in the named band offices, at Council for Yukon First Nations, at Yukon Health, and Yukon College Library.)

Wein, E.E. Nutrient intakes of First Nations people in four Yukon communities. Nutrition Research 15: 1105-1119, 1995.

Wein, E.E. Foods and nutrients in reported diets versus perceived ideal diets of Yukon Indian people. Journal of Nutrition Education 1996; (in press).

Wein, E. E. and Freeman, M.M.R. Frequency of traditional food use by three Yukon First Nations living in four communities. Arctic 48: 161-171, 1995.